

20-8477



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D2571

Job Sheet 172061



Part No: D2571

Job Qty: 12 ea

Part Name: Saddle, Fwd, Out



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 2/12/18

Job Tracking No:

Due Date: 2/23/18

Created By: Michelle Gagnon-Donovan

Type: Stock

Description:

Note: DWG REV F IPP: I 02.10.02 Re-format; Change to Dwg Rev. D & Incorporated D2572 KJ

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	12 Ea	2/22/18	2/22/18	0.00	0.00	Start Up Machining		
100	CNC Vertical Machining	12 pcs	2/22/18	2/22/18	0.57	19.35	HAAS 1		
110	Mill Conv	12 pcs	2/22/18	2/22/18	0.00	1.85	Mill Conv 1		
120	QC	12 pcs	2/22/18	2/22/18	0.00	0.00	QC2		
130	QC	12 pcs	2/22/18	2/22/18	0.00	0.00	QC8		
140	HandFinish	12 pcs	2/22/18	2/22/18	0.00	0.40	HandFinish1		
150	Powdercoat	12 pcs	2/23/18	2/23/18	0.00	0.48	Powdercoat1		
160	QC	12 pcs	2/23/18	2/23/18	0.00	0.00	QC3		
170	Packaging	12 pcs	2/23/18	2/23/18	0.00	0.00	Packaging3		
180	QC21-SA	12 Ea	2/23/18	2/23/18	0.00	0.00	QC21		

Part Op 100 - Program Batch No. SD43562 Double check by: AN 1-Machine Step No 1 per Folio FA051 and inspect per Descriptions: attached Dimension Sheets 2-Machine Step No 2 per Folio FA051 and inspect per attached Dimension Sheets 3-Machine Step No 3 per Folio FA051 and inspect
110 - Machine keyway as per dwg D2571 & D2572
120 - Inspect on CMM as per folio CMM022.
150 - START TIME: 8:10 FINISH TIME: 3:40 O.V.T: 320° N138467

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D8101-007	Saddle Billet	12 Ea (1 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D8101-007	12	48	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Saddle, Fwd Outboard	0.438Inches	+ 0.005 - 0.000	0.443 0.438	
2	Saddle, Fwd Outboard	1.745Inches	+ 0.010 - 0.000	1.755 1.745	
3	Saddle, Fwd Outboard	3.495Inches	+ 0.010 - 0.000	3.505 3.495	
4	Saddle, Fwd Outboard	1.745Inches	+ 0.010 - 0.000	1.755 1.745	

SD43562

Plex 2/12/18 12:54 PM Dart.Gagnon.Michelle



DART Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K64 1K7
CANADA
TEL.: 1 613 632-8200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S043563



Part: D2571

Job No: 172061

Serial No/Batch: S043563

Revision: D2571

Inspector:

Date: 02/19/18

5	Saddle, Fwd Outboard	7.990Inches	+ 0.020 - 0.000	8.010 7.990
6	Saddle, Fwd Outboard	0.490Inches	+ 0.020 - 0.000	0.510 0.490
7	Saddle, Fwd Outboard	0.257Inches	+ 0.005 - 0.000	0.262 0.257
8	Saddle, Fwd Outboard	0.375Inches	+ 0.005 - 0.000	0.380 0.375
9	Saddle, Fwd Outboard	0.490Inches	+ 0.020 - 0.000	0.510 0.490
10	Saddle, Fwd Outboard	1.174Inches	+ 0.010 - 0.000	1.184 1.174
11	Saddle, Fwd Outboard	0.558Inches	+ 0.020 - 0.000	0.578 0.558
12	Saddle, Fwd Outboard	1.174Inches	+ 0.010 - 0.000	1.184 1.174
13	Saddle, Fwd Outboard	1.490Inches	+ 0.010 - 0.000	1.500 1.490
14	Saddle, Fwd Outboard	2.495Inches	+ 0.010 - 0.000	2.505 2.495
15	Saddle, Fwd Outboard	3.869Inches	+ 0.010 - 0.000	3.879 3.869
16	Saddle, Fwd Outboard	0.115Inches	+ 0.020 - 0.000	0.135 0.115
17	Saddle, Fwd Outboard	0.115Inches	+ 0.020 - 0.000	0.135 0.115
18	Saddle, Fwd Outboard	0.240Inches	+ 0.020 - 0.000	0.260 0.240
19	Saddle, Fwd Outboard	0.115Inches	+ 0.020 - 0.000	0.135 0.115
20	Saddle, Fwd Outboard	0.178Inches	+ 0.020 - 0.000	0.198 0.178
21	Saddle, Fwd Outboard	2.940Inches	+ 0.040 - 0.000	2.980 2.940
22	Saddle, Fwd Outboard	0.230Inches	+ 0.020 - 0.000	0.250 0.230
23	Saddle, Fwd Outboard	0.115Inches	+ 0.020 - 0.000	0.135 0.115
24	Saddle, Fwd Outboard	0.308Inches	+ 0.005 - 0.000	0.313 0.308
25	Saddle, Fwd Outboard	0.760Inches	+ 0.005 - 0.000	0.765 0.760
26	Saddle, Fwd Outboard	0.352Inches	+ 0.020 - 0.000	0.372 0.352
27	Saddle, Fwd Outboard	0.470Inches	+ 0.060 - 0.000	0.530 0.470
28	Saddle, Fwd Outboard	0.615Inches	+ 0.020 - 0.000	0.635 0.615
29	Saddle, Fwd Outboard	0.053Inches	+ 0.020 - 0.000	0.073 0.053
30	Saddle, Fwd Outboard	0.240Inches	+ 0.020 - 0.000	0.260 0.240
31	Saddle, Fwd Outboard	1.375Inches	+ 0.020 - 0.000	1.395 1.375
32	Saddle, Fwd Outboard	0.115Inches	+ 0.020 - 0.000	0.135 0.115
33	Saddle, Fwd Outboard	0.240Inches	+ 0.040 - 0.000	0.280 0.240
34	Saddle, Fwd Outboard	0.240Inches	+ 0.020 - 0.000	0.260 0.240
35	Saddle, Fwd Outboard	2.000Inches	+ 0.020 - 0.000	2.020 2.000
36	Saddle, Fwd Outboard	0.023Inches	+ 0.020 - 0.000	0.043 0.023

Plex 2/12/18 12:54 PM Dart.Gagnon.Michelle

DART AEROSPACE LTD	Work Order: 172 062
Description: Saddle, Fwd Outboard	Part Number: D2571
Inspection Dwg: D2571 Rev. F	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2571 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	0.438	0.443		.438	.438	.438	.438		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.000	8.000	8.000	8.000		
F	0.490	0.510		.500	.500	.500	.500		
G	0.257	0.262		.258	.258	.258	.258		
H	0.375	0.380		.376	.376	.376	.376		
I	0.490	0.510		.500	.500	.500	.500		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.569	.570	.569	.569		
L	1.174	1.184		1.179	1.180	1.180	1.179		
M	1.490	1.500		1.495	1.495	1.495	1.495		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	3.869	3.879		3.874	3.874	3.874	3.874		
P	0.115	0.135		.130	.130	.130	.130		
Q	0.115	0.135		.126	.126	.126	.126		
R	0.240	0.260		.253	.253	.253	.253		
S	0.115	0.135		.127	.130	.130	.128		
T	0.178	0.198		.188	.188	.188	.188		
U	2.940	2.980		2.960	2.960	2.960	2.960		
V	0.230	0.250		.240	.240	.242	.242		
W	0.115	0.135		.125	.125	.125	.125		
X	0.308	0.313		.311	.311	.311	.311		
Y	0.760	0.765		.076	.076	.076	.076		
Z	0.352	0.372		.363	.363	.363	.363		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.622	.622	.622	.622		
AC	0.053	0.073		.061	.061	.061	.061		
AD	0.240	0.260		.252	.252	.252	.252		
AE	1.375	1.395		1.385	1.385	1.385	1.385		
AF	0.115	0.135		.128	.128	.128	.128		
AG	0.240	0.280		.240	.240	.240	.240		
AH	0.240	0.260		.251	.251	.251	.251		
AI	2.000	2.020		2.000	2.000	2.000	2.000		
AJ	0.023	0.043		.033	.033	.033	.033		
Accept/Reject							DAS		

Measured by: SBL	Audited by: 20
Date: 18/02/22	Date: 18-02-28

Rev	Date	Change	Revised by	Approved
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	
F	13.03.07	Dwg Rev updated	KJ	

DART AEROSPACE LTD	Work Order: 172061
Description: Saddle, Fwd Outboard	Part Number: D2571
Inspection Dwg: D2571 Rev. F	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2571 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1 5	2 6	3 7	4 8		
A	0.438	0.443		.438	.438	.438	.438	YMS	18/2/24
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.000	8.000	8.000	8.000		
F	0.490	0.510		.498	.499	.499	.502		
G	0.257	0.262		.258	.258	.258	.258		
H	0.375	0.380		.376	.376	.376	.376		
I	0.490	0.510		.500	.500	.500	.500		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.569	.569	.569	.569		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.490	1.500		1.495	1.495	1.495	1.495		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	3.869	3.879		3.875	3.875	3.875	3.875		
P	0.115	0.135		.130	.130	.130	.130		
Q	0.115	0.135		.124	.125	.125	.125		
R	0.240	0.260		.254	.253	.253	.254		
S	0.115	0.135		.130	.130	.127	.128		
T	0.178	0.198		.188	.188	.188	.188		
U	2.940	2.980		2.960	2.960	2.960	2.960		
V	0.230	0.250		.239	.240	.240	.240		
W	0.115	0.135		.121	.120	.120	.120		
X	0.308	0.313		.311	.311	.311	.312		
Y	0.760	0.765		.760	.760	.760	.760		
Z	0.352	0.372		.363	.363	.363	.363		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.626	.626	.625	.625		
AC	0.053	0.073		.066	.068	.068	.068		
AD	0.240	0.260		.250	.245	.250	.250		
AE	1.375	1.395		1.385	1.385	1.385	1.385		
AF	0.115	0.135		.128	.125	.130	.130		
AG	0.240	0.280		.250	.250	.250	.250		
AH	0.240	0.260		.251	.250	.250	.251		
AI	2.000	2.020		2.000	2.000	2.000	2.000		
AJ	0.023	0.043		.033	.033	.033	.033		
Accept/Reject									

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Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	0.438	0.443		0.438	0.438	0.438	0.438		
B	1.745	1.755		1.750	1.748	1.749	1.750		
C	3.495	3.505		3.498	3.497	3.500	3.500		
D	1.745	1.755		1.748	1.747	1.750	1.750		
E	7.990	8.010		8.001	8.006	8.000	8.000		
F	0.490	0.510		0.504	0.507	0.503	0.502		
G	0.257	0.262		.258	.258	.258	0.258		
H	0.375	0.380		.375	.375	.375	.375		
I	0.490	0.510		.500	0.503	0.503	0.501		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.569	0.569	0.570	0.569		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.490	1.500		1.495	1.499	1.499	1.495		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	3.869	3.879		3.874	3.874	3.875	3.874		
P	0.115	0.135		.130	.131	.131	.130		
Q	0.115	0.135		.126	.125	.126	.125		
R	0.240	0.260		.253	.253	.253	0.253		
S	0.115	0.135		.128	.1305	.131	0.130		
T	0.178	0.198		.188	.188	.188	.188		
U	2.940	2.980		2.960	2.960	2.960	2.960		
V	0.230	0.250		.242	.2415	.242	.242		
W	0.115	0.135		.121	.123	.125	.125		
X	0.308	0.313		.3115	.3125	0.312	0.312		
Y	0.760	0.765		.760	0.761	0.760	0.760		
Z	0.352	0.372		0.363	0.363	0.363	0.363		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.627	.6285	0.622	0.622		
AC	0.053	0.073		.070	0.063	0.061	0.061		
AD	0.240	0.260		.252	.252	0.252	0.252		
AE	1.375	1.395		1.385	1.385	1.385	1.385		
AF	0.115	0.135		.126	.128	0.128	0.128		
AG	0.240	0.280		.252	0.250	0.240	0.240		
AH	0.240	0.260		.251	0.251	0.252	0.251		
AI	2.000	2.020		2.000	2.000	2.000	2.000		
AJ	0.023	0.043		.033	0.033	0.033	0.033		

Accept/Reject

DAS

Measured by: SBL
Date: 18/02/28

Audited by: 20
Date: 18-02-28

Rev	Date	Change	Revised by	Approved
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D	05.05.05	Added dimension AI	KJ/RF	
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F	13.03.07	Dwg Rev updated	KJ	

A: _____ Date: 18/02/27

WORK ORDER NON-CONFORMANCE / UPDATE

Closed: 2R Date: SEP 17 2020Work Order update only ☐

Work Order: <u>172 061</u>	DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS			
Part No. <u>D2571</u>		Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐
NCR No. <u>20-8677</u>		Machining ☒	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐
		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
		Large Fab ☐	Composite ☐	Supplier ☐	
e: <u>2018-02-27</u>	Step #: <u>130</u>	QTY Effective: <u>12</u>			MRB (QSI042) Approval

Description Work Order Deviation

Disposition

MRB (QSI042) Approval

DAS
12
9-89

14/2/28

Completed By

18-02-27
Silvia Todorova

Lead hand / Supervisor
Approval Verification

18-02-27
D.P.

QC / QA Coordinator

DAS Approval

55
 9-89 JUL 0 2 2020

la mesure AD = $250 \pm 0,010$ est sous
 la tolérance.

mesuré sur la pièce est de 0,237

Acceptable

Bearing Strength = $131 \text{ KSI} \times 0,237 \times 0,375$
 $= 11,600 \text{ lb}$

Max load per Fitchner (TR-9412-664-18 Zn.A) =
 $15,850 / 4 \text{ fasteners} =$
 4660 lb

Root Cause

FAULT CATEGORY

Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☒	Operator ☒	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	☒ Over/Under tolerance
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Technical Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Fast Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER: _____			